

## Syntax of the Hell: Two Types of Dependencies

We present a cross-linguistic analysis of the aggressively non-D-linker (ANDL) (Pesetsky 1987) in Chinese (*daodi* (1a)), Japanese (*ittai* (1b)), and English (*the hell* (1c)). We first propose that the configuration in (2) underlies this construction cross-linguistically, which is directly observable in Chinese: *daodi* occurs as an IP-level adjunct (1a), must precede/c-command its *wh*-associate (e.g., (3)), and must be c-commanded by the Q which marks the scope of its *wh*-associate (e.g., (4)) (see Kuo 1996). In principle, *daodi* (and *ittai*) can appear in any clause as long as these conditions are met (e.g., (5)).

We then show that two types of dependencies are involved in this *wh*-construction: (A) one between Q and ANDL and (B) one between ANDL and the *wh*-associate (these two types of dependencies can be formed across clauses, as shown in (5a-b)). The (A)-dependency is motivated by the fact that Q and ANDL cannot be separated by an island (Pesetsky 1987). (6) illustrates this point in Chinese. The (B)-dependency is empirically motivated by Japanese data. Miyagawa (1999) and Watanabe (2000) claim that, unlike other *wh*-phrases, *naze* ‘why’ is not subject to the Intervention effect (e.g., (7a)). We assume that this peculiarity of *naze* comes from the fact that it can be inserted directly into the spec of CP, in which case the dependency between Q and *naze* is trivially established. Given this, the distribution of *ittai* in (7b) shows a dependency holding between *ittai* and *naze*. Based on these facts, we argue that (i) ANDL, which is an adverbial element with interrogative force, attracts/agrees with the *wh*-associate, and (ii) Q attracts/agrees with the resulting *wh*-complex, which inherits the adjunct status of ANDL.

We claim that the three languages differ with respect to when the (B)-dependency is formed (as well as the (A)-dependency is). After proposing that the (B)-dependency is formed in covert syntax in Chinese, we extend our proposal to English: *the hell* is generated as an IP-level adjunct to which the *wh*-associate moves in overt syntax to form a constituent (alternatively, *wh* + *the hell* could be generated as a lexical item, which must move to/through the location of the silent ANDL for feature checking purposes), which is reminiscent of Christensen’s (1986) treatment of negation in Norwegian (cf. also Kayne 1998). Japanese can exercise either option. *Ittai* can appear separated from the *wh*-associate (1b). Or, *ittai* and the *wh*-associate may form a constituent: *ittai dare* ‘the hell who’ in (8) appears as a conjunct of a coordinated NP.

Our analysis neatly accounts for the fact that for many English speakers, *the hell* + *wh*-argument patterns with *wh*-arguments rather than with *wh*-adjuncts in terms of the island sensitivity (e.g., (9)) (pace Lasnik and Saito (1992)). This is puzzling because the ANDL + *wh*-argument in Chinese/Japanese patterns with *wh*-adjuncts in showing island effects (e.g., (6)). The explanation goes as follows: Like *daodi/ittai* (see (5)), English *the hell* can be generated in any clause between Q and the *wh*-associate. When *the hell* is merged outside the island as in (10), the movement of *who* to *the hell* yields only a Subjacency violation. On the other hand, (6) is worse because the island contains the adjunct ANDL *daodi*. If ANDL occurs outside of the island, the sentence becomes perfect (e.g., (11) and (12)).

To summarize, we have provided strong empirical evidence for positing two types of dependencies in the *wh*-question involving ANDL. Different languages form the dependencies at different points in the derivation, from which the apparent asymmetry in the extraction pattern between English vs. Chinese/Japanese follows straightforwardly.

- (1) a. (daodi) ta (daodi) mai-le (\* daodi) shenme? (Chinese)  
       he bought what ‘What the hell did you buy?’  
 b. (ittai) kare-wa (ittai) nani-o katta no? (Japanese)  
       he-top what-acc bought Q ‘What the hell did he buy?’  
 c. What the hell did he buy?
- (2) [CP Q ..... [IP ANDL ... wh-associate]]
- (3) (daodi) shei (\*daodi) yao qu Taipei?  
       who want go Taipei ‘Who the hell wants to go to Taipei?’
- (4) \*Lisi daodi xiangzhidao Wangwu mai-le sheme.  
       Lisi daodi wonder Wangwu bought what ‘Lisi wonders what the hell Wangwu bought.’
- (5) a. Ni renwei Lisi daodi mai-le shenme? b. Ni daodi renwei Lisi mai-le shenme?  
       you think Lisi daodi bought what you daodi think Lisi bought what  
 Both: ‘What the hell do you think Lisi bought?’
- (6) \*Nimen zai taolun [ta daodi piping shei de shu]?  
       you prog discuss he daodi criticize who NM book  
       ‘Who the hell are you are discussing the book in which he criticizes t?’ (Chinese)
- (7) a. Kimi-wa piza-sika naze tyuumon-shi-na-katta no?  
       you-top pizza-sika why order-do-neg-past Q  
       ‘Why did you order only pizza (and nothing else)?’  
 b. Kimi-wa (\*ittai) piza-sika (ittai) naze tyuumon-shi-nak-atta no?  
       you-top pizza-sika why order-do-neg-past Q  
       ‘Why the hell did you order only pizza (and nothing else)?’ (Japanese)
- (8) [Taro to ittai dare]-ga naguri-aw-ta no?  
       Taro and ittai who-nom hit-recipr-past Q ‘Taro and who the hell hit each other?’
- (9) a. ??Who the hell are you reading [the book in which he criticized t]?  
       b. ??Who are you reading [the book in which he criticized t]?  
       c. \*Why are you reading [the book in which he criticized the president t]?
- (10) [CP Q [IP the hell ..... [island ..... who]]
- (11) Nimen daodi zai taolun [ta piping shei de shu]?  
       you daodi prog discuss he criticize who NM book  
       ‘Who the hell are you are discussing the book in which he criticizes t?’ (Chinese)
- (12) (ittai) Kimi-wa [kare-ga (\*ittai) dare-o hihan-shita hon]-o yon-da no?  
       you-top he-nom who-dat criticize-did book-acc read-past Q (Japanese)

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